ELYTRA, Vol. 10, No. 2—Nov. 1982
The Journal of
the Japanese Society of Coleopterology

Studies on Cerambycidae (Coleoptera) of Japan (1)

By Hiroshi MAKIHARA

Forestry and Forest Products Institute, P.O. Box 16, Tsukuba
Norin Kenkyu Danchi-nai, Ibaraki, 305 Japan

日本産カミキリムシの研究 (1)

槇原　寛

In the present paper, the results of my recent studies on Cerambycidae of Japan are presented. A new species, *Exocentrus takakuwai* and a new subspecies, *Glenea iriei heikichii* are described. *Acalolepta okinawensis* BREUNING et OHBAYASHI, 1966 is treated as a synonym of *A. oshimana omoro* HAYASHI, 1963.

Subfamily Lamiinae

Tribe Agniini

Acalolepta oshimana omoro HAYASHI (Figs. 1, 2A, A', 3)

Acalolepta omoro HAYASHI, 1963, Ent. Rev. Japan **16**(1): 11.
Acalolepta okinawensis BREUNING et OHBAYASHI, 1966, Bull. Japan ent. Acad. **2** (6): 31, new synonymy.
Acalolepta oshimana omoro: KUSAMA, 1973, New Ins. Collect. **3**, Suppl.: 110.

Specimens examined: 2♂♂4♀♀, Yona, Okinawa I. of the Ryukyus, 9-13. Ⅷ. 1969, H. MAKIHARA leg.; 2♂♂2♀♀, same locality and collecter as above, 12-17. Ⅵ. 1970; 10♂♂4♀♀, same locality and collecter as above, 15-17. Ⅶ. 1970; 1♂, Oku, Okinawa I., 29. Ⅵ. 1976, H. MAKIHARA leg.; 1♂1♀, same locality and collecter as above, 30. Ⅵ 1976; 2♂♂1♀, Yona, Okinawa I., 9-11. Ⅶ. 1977, H. MAKIHARA leg.; 1♂, Mt. Yonaha, Okinawa I., 11-12. Ⅶ. 1977, H. MAKIHARA leg.

Distribution: Okinawa I. of the Ryukyus.

Diagnosis: *Acalolepta okinawensis* BREUNING et OHBAYASHI from Okinawa I. has been collected only a male specimen, treated as the holotype. And the holotype is a small specimen having the short antenna. *A. okinawensis* is very similar to *A. oshimana omoro* HAYASHI from Okinawa I., and the former is indistinguishable from the latter except for two points, body is small and antenna is short. The results of my recent study on the relationship of antennal length to body of *A. oshimana omoro* are as follows: The ratios of antennal length to body of small specimens

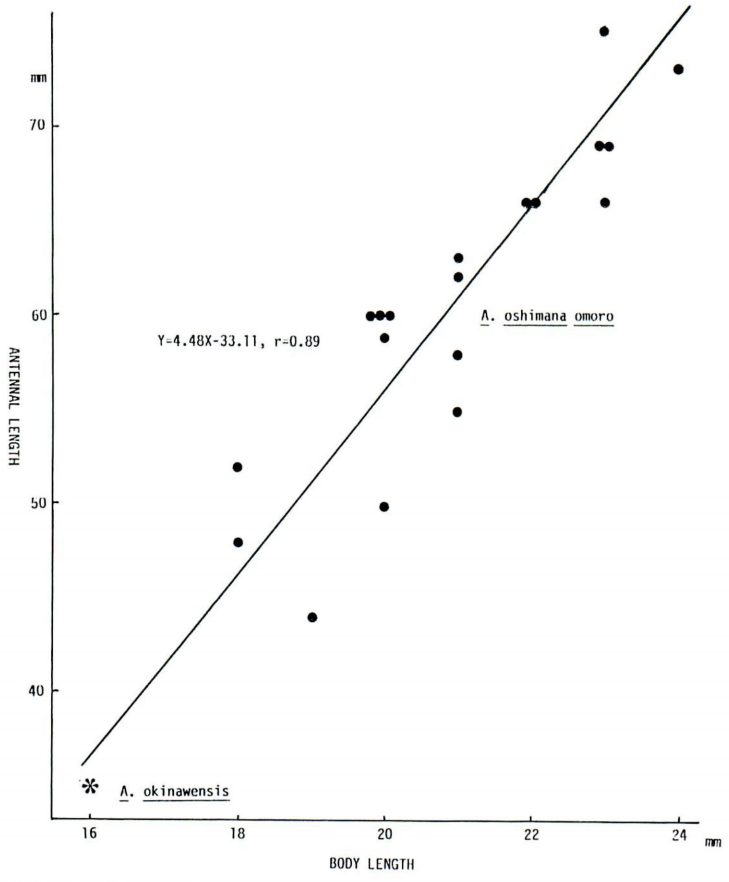


Fig. 1. Relationship of antennae to body of *Acalolepta oshimana omoro* HAYASHI in male.

are lower than them of large specimens (Fig. 1). It is satisfactory to consider that the holotype of *A. okinawensis* is included in variations of *A. oshimana omoro*. And then, I treated *A. okinawensis* as a synonym of *A. oshimana omoro*.

A. oshimana omoro HAYASHI is related to *A. oshimana oshimana* (BREUNING) from Amami-Oshima I., Tokunoshima I. and Okinoerabu I., but differs from it following points.

A. oshimana oshimana: Antennae somewhat long, relative length of antennae to body 2.22 ±0.05 in female (Fig. 3); apex of 7th abdominal tergite concave in male (Fig. 2B′); lateral lobes (parameres) of male genitalia slender (Fig. 2B).

A. oshimana omoro: Antennae somewhat short, relative length of antennae to body 2.07± 0.07 in female (Fig. 3); apex of 7th abdominal tergite not so concave in male (Fig. 2A′); lateral lobes (parameres) of male genitalia not so slender (Fig. 2A).

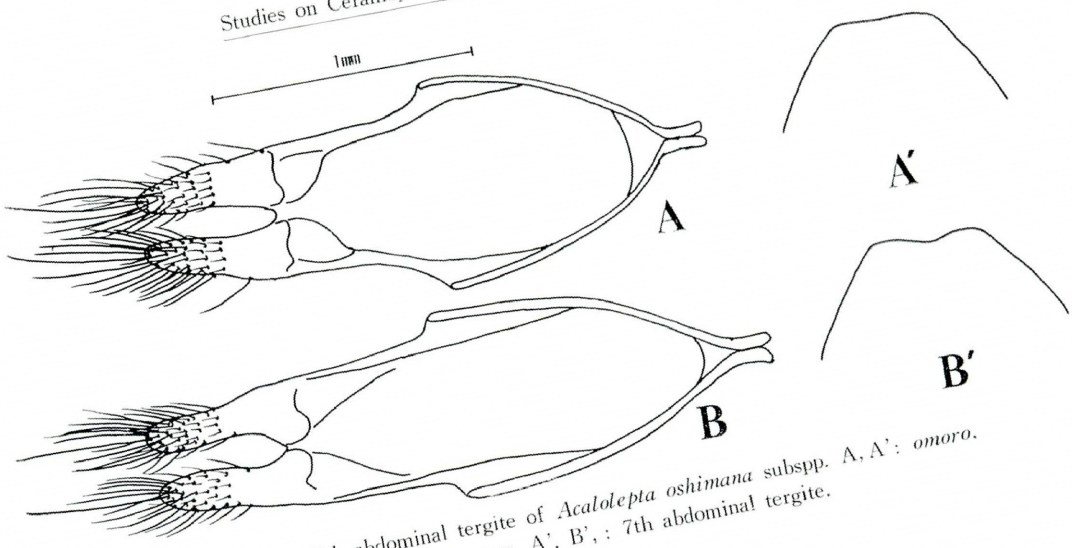


Fig. 2. Tegmen and 7th abdominal tergite of *Acalolepta oshimana* subspp. A, A': *omoro*, B, B': *oshimana*, A, B: Tegmen, A', B', : 7th abdominal tergite.

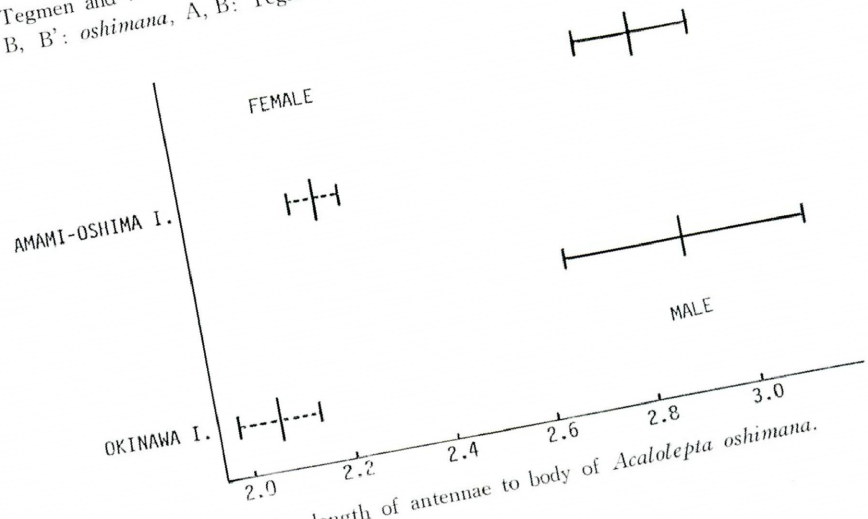


Fig. 3. Relative length of antennae to body of *Acalolepta oshimana*.

Tribe Acanthocinini

***Exocentrus takakuwai* sp. nov.** (Figs. 4A,C,E,G, 5A, 6A,C)

(Japanese name: Ryukyu-kumogata-keshi-kamikiri)

Body reddish brown to brown. Elytron with five brown pubescent markings, first and second markings not clear and sometimes disappeared at near base and basal 2/5 near suture, third not so clear at basal 2/5 near lateral side, fourth large and clear at apical 1/3 and fifth very small and clear at near suture.

Head finely punctured, with dense prostrate golden yellow pubescence and sparse curved bristles

Antennae 1.39 (male), 1.27 (female) times as long as body, relative length of each segment 11.7 3.5 : 10.9 : 12.1 : 10.9 : 10.1 : 9.3 : 8.9 : 8.2 : 7.0 : 7.4 (male), 12.3 : 3.5 : 10.6 : 11.6 : 10.9

1.6 : 9.5 : 8.5 : 8.5 : 7.0 : 7.0 (female); lst segment with rather dense prostrate whitish yellow pubescence, a few suberect short light brown hairs and a few oblique brown bristles; 2nd to 11th segments with rather dense yellowish brown pubescence on basal parts, and these lesser toward apical segment; 3rd to 9th segments with sparse oblique long bristles on inner-undersides; apices of 3rd to 10th segments with two oblique long brown bristles on outer-undersides; 3rd to 10th segments with sparse erect short brown hairs; 2nd to 11th segments except for basal parts with dense prostrate brown pubescence.

Pronotum finely punctured, with dense prostrate whitish yellow pubescence, a few suberect bristles and a few erect long brown hairs. Lateral projections not so strongly developed.

Scutellum trapeziform, with dense prostrate whitish yellow pubescence.

Elytra about 1.8 times as long as broad, with dense prostrate light yellowish brown pubescence irregularly, sparse suberect dark brown somewhat long bristles and these longer toward apices.

Ventral side (except for metasternum and abdominal sternites) with dense prostrate short brown pubescence; metasternum and abdominal sternites with dense prostrate rather long yellowish brown pubescence.

Legs somewhat stout, mid femora not so strongly swelled.

Male genitalia slender. Median lobe with median struts; the ventral edge of median oriface somewhat truncated. Tegmen without basal-piece; lateral lobes (parameres) rather slender, with a few long setae at apices; ringed part geniculated and rather wide.

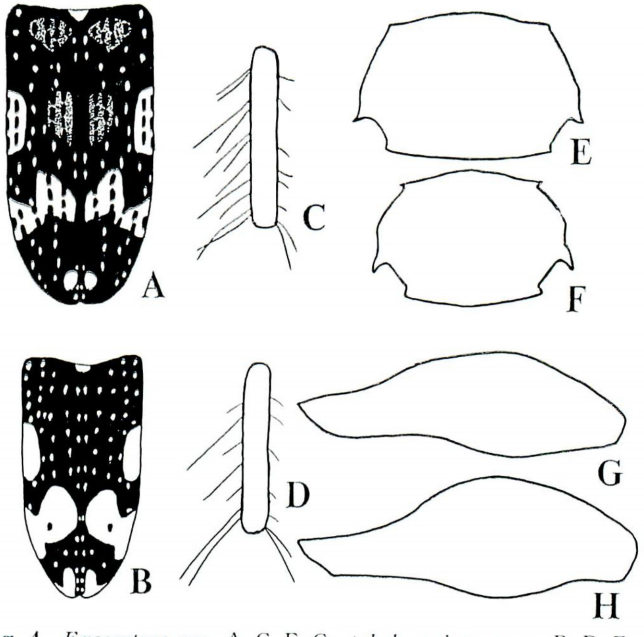


Fig. 4. *Exocentrus* spp. A, C, E, G: *takakuwai* sp. nov., B, D, F, H: *fasciolatus*, A, B: Elytral markings, C, D: 6th antennal segment, E, F: Pronotum, G, H: Mid femora.

Length: 4.6 mm (male), 5.0–5.6 mm (female).

Distribution: Tokunoshima I. of the Ryukyus.

Type material: Holotype ♀ (Type No.2391, Kyushu University), Inokawa, Tokunoshima I. of the Ryukyus, 28–31. V. 1970, H. MAKIHARA leg. Paratypes: 1♂ 1♀, Tokunoshima I., VI. 1972, emerged from cutted tree branches, M. TAKAKUWA leg.

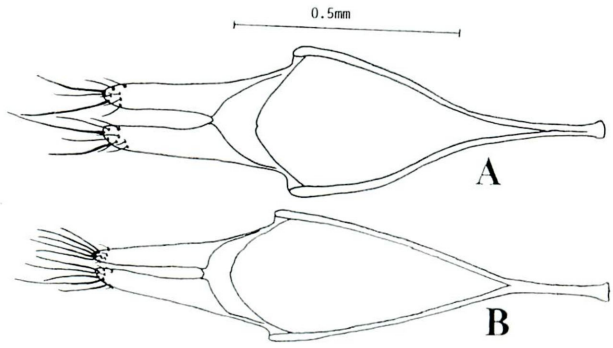


Fig. 5. Tegmen of *Exocentrus* spp. A: *takakuwai* sp. nov., B: *fasciolatus*.

Type depository: The holotype is preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

This new species is related to *E. fasciolatus* BATES from Hokkaido, Honshu, Shikoku, Kyushu, Awashima I. (Niigata Pref.), Sado I., Kanmurijima I., Oki I., Tsushima I., Amakusa I., Awajishima I. and Tanegashima I., but differs from it following points.

E. fasciolatus: Antennae short, 1.19 (male), 1.17 (female) times as long as body; antennal segments 3–10 with sparse oblique long brown bristles on inner-undersides; elytra with sparse erect somewhat short bristles; two brown pubescent markings on elytron, one at near apex and another one at apical 1/3, developed and somewhat large; mid femora strongly swelled (Fig. 4H); lateral lobes (parameres) of male genitalia slender and long; ringed part of male genitalia not so wide.

E. takakuwai sp. nov.: Antennae somewhat long, 1.39 (male), 1.27 (female) times as long as body; antennal segments 3–10 with rather dense oblique long brown bristles on inner-undersides; elytra with sparse erect long bristles; two brown pubescent markings on elytron, one at near apex and another one at apical 1/3, not so developed and small; mid femora not so strongly swelled (Fig. 4G); lateral lobes (parameres) of male genitalia slender but not so long; ringed lateral lobes (parameres) part of male genitalia somewhat wide.

Tribe Saperdini

***Glenea iriei heikichii* subsp. nov.** (Figs. 7A,D, 8C,F)

(Japanese name: Okinawa-monki-kamikiri)

This new subspecies is related to *G. iriei iriei* HAYASHI from Amami-Oshima I. and Tokunoshima I. of the Ryukyus, and somewhat similar to *G. chujoi* MITONO from Taiwan, but differs from them by the following points.

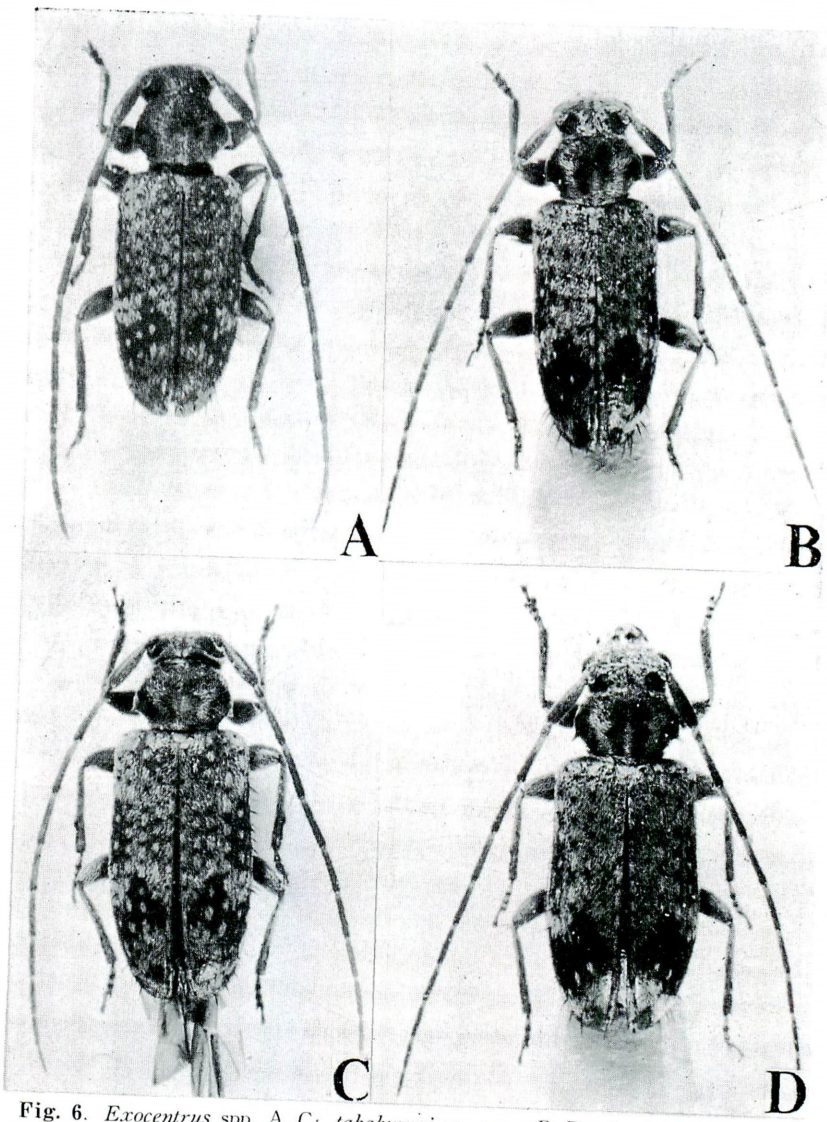


Fig. 6. *Exocentrus* spp. A, C: *takakuwai* sp. nov., B, D: *fasciolatus*, A, B: Male, C, D: Female.

1. Antennae rather short, 1.3 times shorter than body; antennae with dark brown pubescence densely; apices of antennal segments 6-9 with two rather short brown hairs on ventral sides; pronotum rather slender, the ratios of width to length 1.00 (male), 1.05 (female); lateral side of pronotum without marking; scutellum with yellow pubescence; elytra with small dark brown markings; elytra slender, relative length to width 2.43 -2.44 (male), 2.32 (female), elytra with somewhat long suberect yellow hairs sparsely; legs light brown; mesosternal process narrow (Fig. 7A, B); 7th abdominal sternite narrow (Fig. 7D, E) in male; 7th abdominal sternite not so raised at near apex 2

— Antennae long, 1.4 times longer than body; antennal segments 6-11 with silver white pubescence densely; antennal segments 6-9 with two rather short brown hairs on ventral sides; pronotum wide, the ratios of width to length 1.10 (male), 1.22 (female); lateral side of pronotum with a black marking; scutellum dark brown on lateral side near base; elytra with large dark brown markings; elytra not so slender, relative length to width 2.17 (male), 2.16 (female); elytra with somewhat long suberect brown hairs sparsely; legs brown;

mesosternal process wide (Fig. 7C); 7 th abdominal sternite wide in male (Fig. 7F); 7 th abdominal sterinte strongly raised atnear apex ..... *G. chujoi* MITONO (Fig. 8A, D)

2. Body with pale orange yellow pubescence; antennae rather short, relative length to body 1.22 (male), 1.09 (female); pronotum and elytra with small dark brown markings; 7th abdominal sternite rather wide at basal part (Fig. 7E) ..... *G. iriei iriei* HAYASHI (Fig. 8B, D)

— Body with pale orange yellow pubescence; antennae rather long, relative length to boody 1.26 (male), 1.13 (female); pronotum and elytra with very small dark brown markings; 7th abdominal sternite rather narrow at basal part (Fig. 7D) ..... *G. iriei heikichii* subsp. nov.

Length: 9.4–9.7mm (male), 10.3–11.0mm (female).

Distribution: Okinawa I. of the Ryukyus.

Type material: Holotype ♂ (Type No. 2392, Kyushu University), Yona, Okinawa I. of the Ryukyus, 1. Ⅶ. 1977, H. IRIE leg. Paratypes: 1♂, same data as holotype; 2♀♀, Benoki, Okinawa I., 28. Ⅵ. 1977, H. IRIE leg.

Type depository: The holotype is preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

Acknowledgement

I wish to express my sincere to Messrs N. OHBAYASHI of Kanagawa Experiment Station, M. TAKAKUWA of Yokohama city and H. IRIE of Fukuoka Pref. for the loan of the valuable specimens as well as the type specimens for my present study.

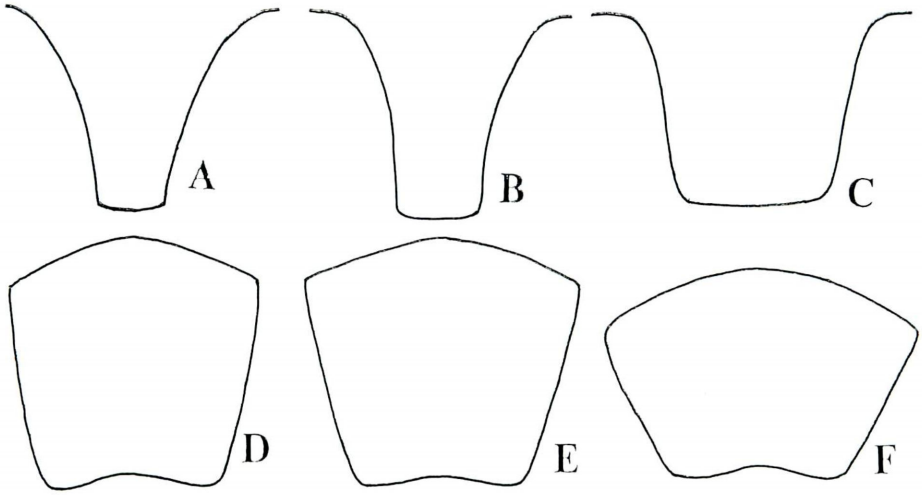


Fig. 7. *Glenea* spp. A, D: *iriei heikichii* subsp. nov., B, E: *iriei iriei*, C, F: *chujoi*, A, B, C: Mesosternal process in male, D, E, F: 7th abdominal sternite.

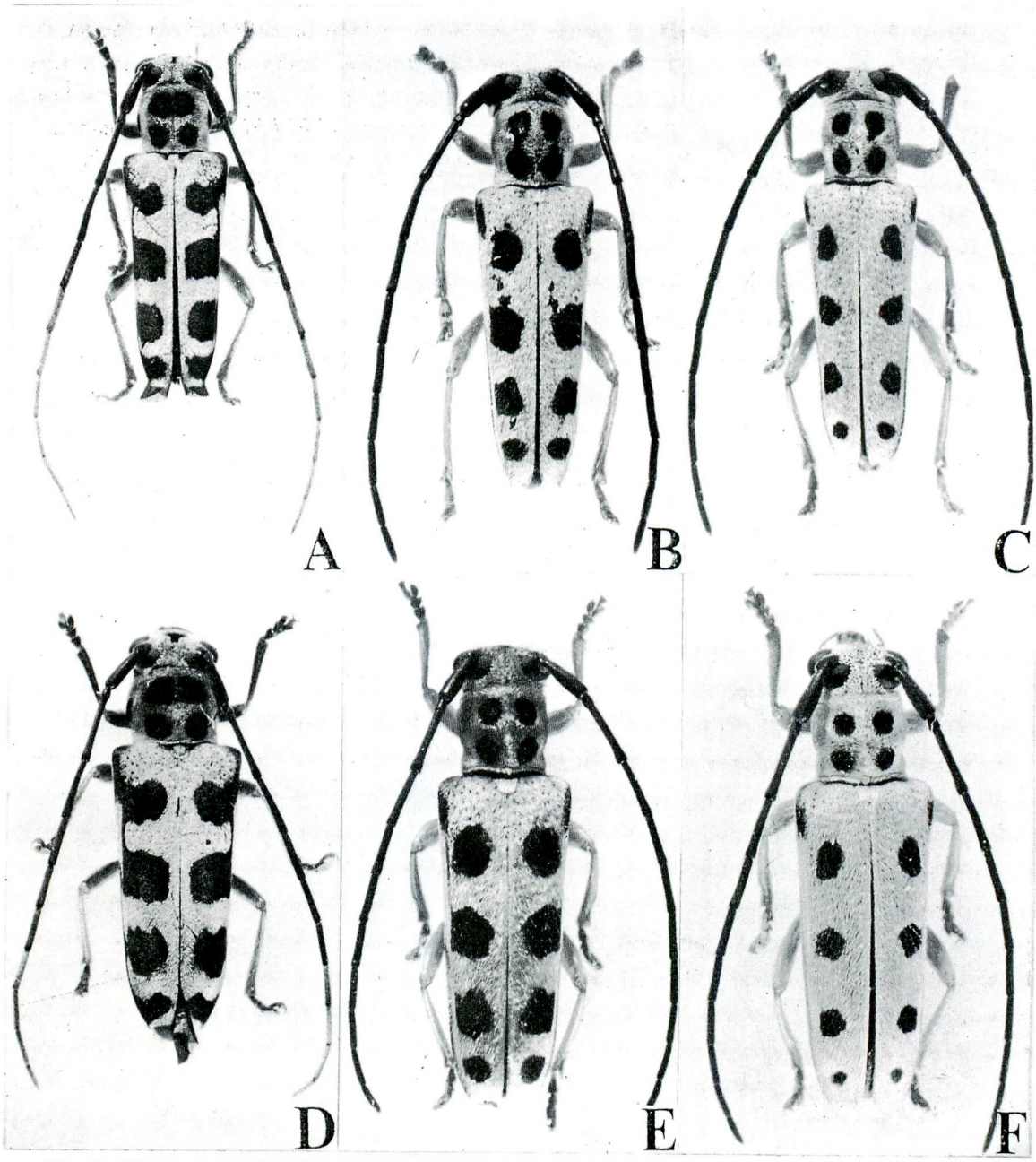


Fig. 8. *Glenea* spp. A, D: *chujoi*, B, E: *iriei iriei*, C, F: *iriei heikichii*. A, B, C: Male, D, E, F: Female.

摘　要

(1) オキナワビロウドカミキリ *Acalolepta okinawensis* BREUNING et OHBAYASHI, 1966 をオモロビロウドカミキリ *A. oshimana omoro* HAYASHI, 1963のシノニムとした．オキナワビロウドカミキリはタイプ標本の雄1頭しか採集されておらず，体長16 mmと非常に小型で触角は体長の2.2倍と短かいものである．オモロビロウドカミキリの雄は体長18—24 mmと大型で触角も体長の2.5—3.3倍と長い．そして，この両種の区別点は触角の長さの相異だけ

である．そこでオモロビロウドカミキリの体長と触角長との相関関係を調べてみると，体が小さくなればなるほど触角と体長との比が小さくなることがわかった．この事からオキナワビロウドカミキリはオモロビロウドカミキリの個体変異と考えられ，オモロビロウドカミキリのシノニムと，扱うのが妥当と考えられる．

(2) 1新種リュウキュウクモガタケシカミキリ *Exocentrus takakuwai* sp nov を記載した．この新種は徳之島に特産で，クモガタケシカミキリ *E. fasciolatus* BATES に近縁であるが触角はより長く，触角第3—10節内側下方の剛毛がより多く，中脚の腿節はそれほど強くふくらまないなど，多くの点で区別される．

(3) 1新亜種オキナワモンキカミキリ *Glenea iriei heikichii* subsp. nov. を沖縄島より記載した．この新亜種は奄美大島・徳之島に産するアマミモンキカミキリ *G. iriei iriei* HAYASHI に近縁であるが，触角がより長く，前胸背と翅鞘上の斑紋がより小さいなどの点で区別できる．また，この両亜種に似ている台湾のクワノモンキカミキリ *G. chujoi* MITONO との比較もあわせて行なった．

References

BATES, H.W. 1873. On the Longicorn Coleoptera of Japan. *Ann. Mag. nat. Hist.*, (4)**12**: 380-384.

BREUNING., S. 1954. Nouveaux Lamiaires du Musèum national d'Histoire naturelle (1) (Col. Cerambycidae). *Bull. Soc. ent. France*, **59**: 68-73.

——— 1956. Revision der Gattung *Glenea* Newm. *Ent. Arb. Mus. G. Frey*, **7**: 1-199, 671-893.

BREUNING, S. & K. OHBAYASHI. 1966. Nouveaux Lamiaires du Japan (3) (Coleoptera, Cerambycidae). *Bull. Japan ent. Acad.*, **2**: 31-36.

EHARA, S. 1954. Comparative anatomy of male genitalia in some Cerambycid beetles. *Jour. Fac. Sci. Hokkaido Univ. Ser.* 6. *Zool.*, **12** (1/2): 61-115.

HAYASHI, M. 1971. Studies on Cerambycidae from Japan and its Adjacent Regions (Col.) 18. *Ent. Rev. Japan*, **23** (1): 1-18.

KOJIMA, K. & M. HAYASHI. 1969. *Insect's life in Japan* **1**. *Cerambycidae*: 1-295, 56 pls. Hoikusha. (In Japanese)

KUSAMA, K. 1973. The list of biology and distribution of Cerambycidae in Japan. *New Insect Collecting* **3**, *Suppl.*: 1-159. (In Japanese)

MITONO, T. 1937. A new *Glenea*-species from Formosa (Coleoptera: Cerambycidae). *Mushi* **10** (2): 149-151.

ELYTRA, Vol. 10, No. 2—Nov. 1982
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A New Species of the Genus *Chlorophorus* from Is. Minami-iwojima, the Volcano Islands (Coleoptera, Cerambycidae)*

By Masataka SATÔ[1] and Nobuo OHBAYASHI[2]

1) Biological Laboratory, Nagoya Women's University, Nagoya 468
2) Miura Branch, Kanagawa Horticultural Experiment Station, Miura 238-03

南硫黄島産クロトラカミキリ属の1新種
佐藤正孝・大林延夫

Chlorophorus minamiiwo M. SATÔ et N. OHBAYASHI, sp. nov.

(Japanese name: Minamiiwo-torakamikiri)

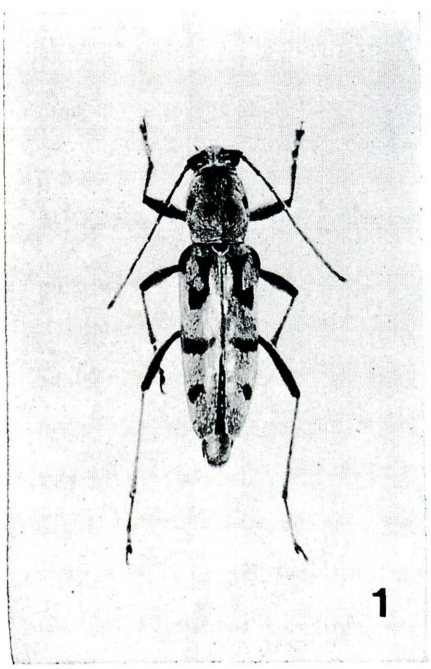


Fig. 1. *Chlorophorus minamiiwo* M. SATÔ et N. OHBAYASHI, sp. nov., male.

Male. Body elongate, almost black and densely covered with recumbent pale yellowish pubescence all over except for the markings of pronotum and elytra which are covered with brownish pubescence; maxillary and labial palpi, fifth tarsal joints and claws brown. Pronotum and each elytron furnished respectively with four markings which are arranged as follows: pronotum—two oval spots a little behind the middle of disk and an oval spot at the each lateral side of the middle; elytron—oval spot at the shoulder, L-shaped one at the basal third, transverse stripe just behind the middle and oblique oval spot at the apical third.

Head a little broader than the anterior margin of pronotum; median furrow distinct; surface finely and somewhat closely punctate, but the punctures on lateral and posterior areas being rugose; gena about 1.5 times as deep as the lower eye-lobe; antennae reaching near the

* This study is the result in part of the Comprehensive Scientific Survey of the Minami-iwojima Island Wilderness Area, supported by the Envilonment Agency, Japan.

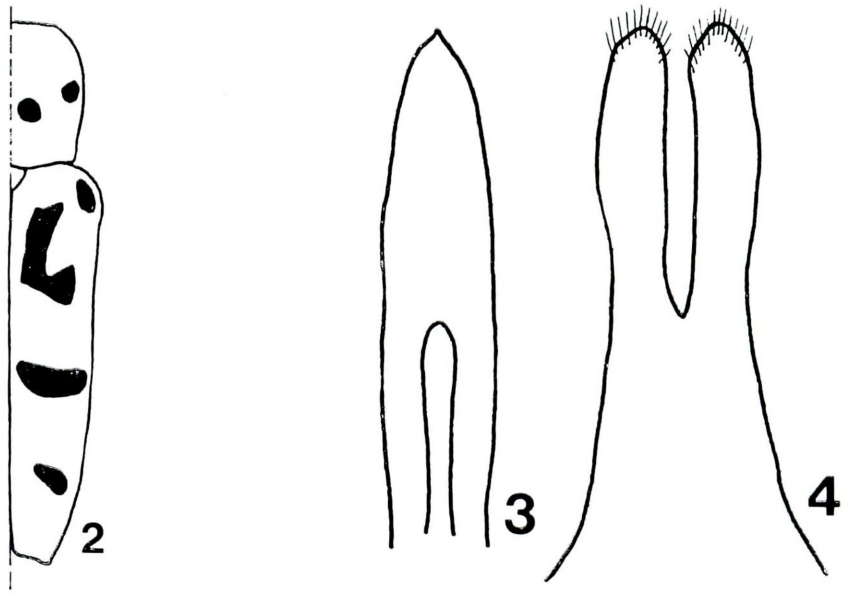


Fig. 2. Modified markings of *C. minamiiwo*. **Figs. 3-4.** Male genitalia of *C. minamiiwo* —3: apical portion of median lobe, 4: apical portion of tegmen. (Mr. K. ISHIDA del.).

middle of elytral length, approximate ratio of respective length as 3.5 : 1 : 3 : 3 : 3 : 2.8 : 2.5 : 2.3 : 2.3 : 2 : 2.5. Pronotum moderately convex, about 1.3 times as broad as head, slightly longer than broad, broadest near the middle; posterior margin about 1.2 times as broad as anterior margin; sides gently rounded; surface strongly punctate on most area, and rugosoimbricately punctate on lateral and posterior areas, the strong punctures separated from one another by about a half to own their diameter. Scutellum finely and closely punctate. Elytra about 1.3 times as broad as pronotum, about 2.3 times as long as broad, broadest at the shoulder, thence gently narrowed posteriad; apex obliquely truncate; surface finely and closely punctate, the punctures more or less transversely rugose and separated from one another by about a half of their diameter. Legs moderate in size, hind tibiae more or less curved inwards; length of the first hind tarsi nearly same as the remaining joints taken together and about 0.6 times as long as elytral breadth. Male genitalia as shown in figures.

Female. Body somewhat stouter than male. Pronotum shallowly and rugosoimbricately punctate. Approximate ratio of respective length of antennae as follows: 4 : 1 : 3.3 : 3.2 : 3.4 : 3.2 : 3 : 2.4 : 2.2 : 1.9 : 2.4. Length of the first hind tarsi about 0.5 times as long as elytral breadth.

Length: 9.4-10.1 mm; breadth; 2.2-2.6 mm.

Holotype: ♂, Is. Minami-iwojima, Volcano Islands, Japan, alt. 900m, June 16, 1982, M. SATÔ leg.

Allotype: ♀, same data as the holotype.

Paratypes: 3♂♂, same data as the holotype; 1♂, same locality as the holotype, June 16, 1982, N. ISHII leg.

All the specimens were captured on the flower of *Hydrangea macrophylla* SER. form *normalis* (WILSON) HARA at the top area of this island. The plant is determined by Prof. H. OHBA, to whom we are indebted.

The holo-, allo-, and one paratype are preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo. The remaining paratypes are preserved in the collection of the Biological Laboratory, Nagoya Women's University.

The present new species is somewhat related to *C. boninensis* KANO, 1933 from the Ogasawara Islands and *C. yayeyamensis* KANO, 1933 from Japan, the Ryukyus and Formosa, but may be distinguished from those species by the colour of pubescence which is pale yellow and the pattern of markings which are reduced. It is also allied to *C. kobayashii* KOMIYA, 1976 from the Ogasawara Islands, but can be separated from it in the different structure of male genitalia.

摘　要

1982年6月に環境庁が行なった南硫黄島原生自然環境保全地域の学術調査によって得られたクロトラカミキリ属の1種を，ここに新種ミナミイオウトラカミキリとして記載した．この種は，オガサワラトラカミキリやヤエヤマトラカミキリに似ているが，体毛が淡黄色で，前胸背および翅鞘の斑紋が縮小傾向にあることによって区別できる．一見オガサワラキイロトラカミキリに似るが，雄交尾器の形態からは全く別の系統と考えられる．なお，今回の標本は，すべて島の頂上付近だけに生育していたガクアジサイの花上で得られたものである．

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台湾産ゴミムシダマシ科解説〔V〕

益本　仁雄

Higashikamigō-chō 15-9, Totsuka-ku, Yokohama City, Kanagawa Prf. 247.

Tenebrionidae of Formosa (5) by Kimio MASUMOTO

Tribe Strongyliini

Strongylium nanfangum sp. nov.

Brownish black; antennae, legs, mouth organs, undersurface etc., lighter in color; hairs on surfaces golden yellow; weakly, metallically shining. Elongate and convex above.

Head subhexagonal, weakly convex, closely punctate, densely haired, with short median impression on vertex; frons very short; fronto-clypeal border backward-arcuate, finely grooved; clypeus transverse, subparallel-sided, transversely convex, with hairs in anterior portion longer than those on rest of head, short transverse impression just before fronto-clypeal border; genae fairly large, obliquely, roundly produced and raised; eyes very large, arched laterally, distance between them very narrow and same length as 2nd antennal joint; antennae filiform, reaching base of elytra, 5th joint to 10th moderately dilated to each apex, 11th ovoid, relative length of each joint (base to apex) : 4.2, 1.1, 6.5, 6.3, 4.8, 4.2, 3.5, 3.2, 3.0, 2.8, 2.6.

Pronotum barrel-shaped (breadth:length=23.0:10.5), with front a little narrower than base; front border feebly arcuate to rear, margined; basal border slightly bisinuate, also margined; sides weakly sinuate before base; front angles rounded and hind ones a little acute in dorsal view; disc moderately convex but softly flattened in middle, closely and coarsely punctate, punctures often coalescent, moderately densely, shortly haired, broadly, shallowly grooved along median. Scutellum tongue-shaped, densely pubescent.

Elytra oblong (length:breadth=102.0:36.5), broadest near base, very feebly narrowed to rear, then moderately rounded in apical 1/3, very softly indented from both sides at basal 1/3; dorsum strongly convex, distinct wave-like depression between 1st to 5th interval on each elytron, thus seen as 5 shallow concavities arranged longitudinally; disc with rows of large punctures, those in inner portion smaller and closely set, those in outer larger and often coalescent, so seen

as large elongate punctures; intervals nearly flat in inner portion, raised and ridge-like in outer, moderately closely, finely punctate, haired, hairs longer but a little sparser than those on pronotum; sides softly enveloping body, finely margined; apexes slightly produced to rear and dehiscent; epipleura entirely margined.

Terminal joint of each maxillary palpus fairly large and securiform, with arcuate outer side about 1.4 times length of inner side and 1.5 times length of apical.

Prosternum reticulate and fairly densely, finely haired, strongly raised and softly depressed between procoxal cavities, with prosternal process subcordate; mesosternum fairly closely, finely punctate, shallowly wrinkled, moderately densely, finely haired, distinctly convex in anterior-inner portion along each mesocoxal cavity, hollowed in Y-shape in middle; metasternum closely, finely punctate and haired, rather coriaceous in lateral portions. Abdomen closely, finely punctate, densely and finely haired, hairs somewhat longer in lateral portions, anal sternite feebly depressed in middle near base, truncate at apex.

Legs long, closely, finely punctate, very shortly haired; femora slender; fore tibiae nearly straight, middle ones very slightly in- and upwardly curved, hind ones very slightly outwardly bent at middle; relative length of each joint of fore, middle and hind tarsi (base to apex): 2.0, 1.5, 1.4, 1.3, 8.0; 11.5, 4.9, 3.4, 2.6, 10.5; 8.8, 4.9, 2.8, 10.5, respectively; claws large and sharp.

Body length: ca. 32 mm.

Holotype: ♀, Kusukusu-Suchungchi, Pingtung Hsien, Formosa, 20-21. IV. 1928, M. MATSUMURA leg.

This new species resembles *Strongylium sinuatipenne* MIWA from Formosa, but is easily distinguishable in following points:

1) the body is larger and stockier,
2) the upper surface is less strongly metallically shining, but is covered with pily golden yellowish hairs,
3) the head is fairly distinctly depressed in middle,
4) the pronotum is more coarsely punctate and softly flattened in middle,
5) the elytra are more strongly punctate (punctures are somewhat foveolate or elongate especially in the lateral portions), have 5 distinct shallow concavities, and are slightly produced and dehiscent in apical portion, etc.

This specimen was examined through the courtesy of Prof. Dr. S. TAKAGI in Hokkaido University, and the holotype is preserved in the Entomological Institute, Faculty of Agriculture, Hokkaido University in Japan.

Strongylium endoi sp. nov.

Dark brownish black; antennae, tarsi, mouth organs, basal portion of gula, maxillary palpi, etc., lighter in color; hairs on clypeus, labrum and undersurface of each tarsal joint yellowish brown; upper surface, especially elytra, bearing purplish tinge; feebly sericeously shining. Elongate; longitudinally convex above.

Head a little transverse, moderately convex; frons short and narrow, glassy and almost impunctate, moderately declined to front, with median groove; fronto-clypeal border remarkably grooved, backward-arcuate, with both ends reaching outer margin; clypeus transverse, subparallel-sided, truncate in front, moderately, transversely convex, closely, finely punctate, haired in anterior portion, glabrous in front, with short, shallow, transverse impression before fronto-clypeal border; genae rather small, flabellate, distinctly raised in outer portions, compared with clypeus less closely, finely punctate; eyes very large, moderately convex above, strongly arched laterally; interocular space narrow, about 1/4 eye transverse diameter distant, closely, roughly punctate, impressed along median; antennae filiform, reaching basal 1/5 of elytra, relative length of each joint (base to apex): 3.0, 0.8, 4.7, 4.2, 3.6, 3.4, 3.3, 3.1, 3.0, 2.7, 2.7.

Pronotum transverse (breadth:length=17.0:13.0), broadest at anterior 1/3, rather strongly, roundly narrowed to front, gradually narrowed to rear; front border nearly straight, moderately margined, margin somewhat glassy, disappearing just after front angles, sparsely scattered with minute punctures; basal border fairly thickly margined, margin also somewhat glassy, sparsely scattered with minute punctures; sides abruptly declined, not widely margined in middle; front angles obtuse; hind angles subrectangular; disc fairly strongly convex above, rather strongly, fairly closely (except in middle) punctate, punctures slightly larger than those on head, broadly grooved along median, often impressed at basal 1/3 on both sides. Scutellum wide, tongue-shaped, microscopically punctate, irregularly sculptured.

Elytra comparatively large (length:breadth=60.0:27.3), broadest at apical 5/12, roundly narrowed to rear, feebly, gradually narrowed to front; dorsum strongly convex, faintly flattened after scutellum; disc deeply punctate-striate, punctures in striae somewhat longitudinal, distance between them about 1–2 their diameter, with 3rd to 5th stria reaching basal border; intervals fairly strongly convex, weakly transverse-reticulate, microscopically, sparsely punctate; sides softly enveloping body, very finely margined; apexes feebly produced to rear, dehiscent; epipleura margined only opposite abdomen (*Holostrongylium*).

Mentum subcordate, truncate at base, raised in anterior-median; gula triangular, microreticulate, shortly impressed at anterior portion on both sides; terminal joint of each maxillary palpus medium-sized, with nearly straight outer side about 1.5 times length of inner, 1.2 times length of

apical.

Prosternum rather narrow, rugose in anterior portion, finely punctate and rugose in middle, with intercoxal space fairly broad, strongly raised and broadly concaved along median, prosternal process wide triangular; mesosternum closely, finely punctate and a little rugose, raised in anterior-inner portion along each coxal cavity, fairly deeply hollowed in posterior-median; metasternum moderate-sized, glassy, finely punctate, shallowly wrinkled, punctures larger in lateral portions, finely grooved from middle to rear border. Abdomen finely punctate, 2 anterior sternites and basal half of 3rd shallowly wrinkled, 2 apical more finely punctate than previous 3, anal sternite semicircularly depressed and fairly markedly haired in posterior portion in male, truncate at apex.

Legs slender; fore tibiae nearly straight, each with undersurface of apical 2/3 slightly indented and densely, shortly haired, middle tibiae slightly curved upward, also haired in apical 5/7 of undersurface, hind tibiae slightly curved upward, very feebly twisted, haired in apical 6/7 of inner side; tarsi long, relative length of each joint (base to apex): 2.0, 0.9, 0.8, 0.7, 4.6; 8.5, 4.2, 2.9, 1.7, 4.9; 10.1, 3.4, 2.0, 5.2, respectively; claws relatively small but sharp, with obtuse, laminate, small tooth at each basal portion.

Body length: 18.5–21.5 mm.

Holotype: ♂, Liukuei, Kaohsiung Hsien, Formosa, 30. IV. 1982, T. ENDO leg.; paratypes: 5 exs., ditto.

This new species somewhat resembles *Strongylium okumurai* MASUMOTO from Formosa, but is easily distinguishable from the latter in having a larger body with purplish tinge on upper surface, a broader pronotum with sides not completely margined, and a differently shaped aedeagus, etc.

Tribe Cnodalonini

Hemicera nakamurai sp. nov.

Dark reddish brown; basal half of each antenna, lateral margins of pronotum, tarsi, mouth organs, anterior half of undersurface etc., lighter in color; hairs on labrum and legs yellowish; head moderately bearing somewhat purplish, pronotum and elytra strongly bearing coppery luster. Elongate-oblong, feebly widened posteriorly; moderately convex above.

Head rather small, strongly transverse, feebly convex oblique-forward in lateral view, moderately and minutely punctate; frons simply, gradually sloping forward; frontal suture fine and straight, reaching anterior margin of each eye; clypeus short but wide, more closely punctate than frons in posterior half, with membranous anterior half, which is impunctate, convergent

forward, straightly truncate in front; labrum transverse-oblong, feebly convex, rather distinctly pubescent; genae small, minutely punctate like clypeus, with outer margins obliquely rounded; eyes fairly large, rather strongly, roundly produced laterally, distance between them about twice length of their transverse diameter; antennae medium-sized, reaching basal 3/4 of pronotum, 6 apical joints flattened and somewhat club-like, 6th joint to 10th dilated to each apex, 11th large and ovoid, relative length of each joint (base to apex): 1.6, 0.8, 1.5, 0.9, 0.8, 1.0, 1.0, 1.3, 1.2, 1.2, 1.5.

Pronotum transverse-quadrate (breadth: length=15.0:9.5), broadest at base and/or after middle, very slightly sinuate before base; front border widely, very slightly emarginate, finely margined but margin obsolete at median 1/4; basal border fairly strongly bisinuate, shortly truncate opposite scutellum; sides remarkably grooved and margins reflexed; front angles rounded; hind angles angulate and very slightly, obliquely produced; disc moderately convex, more strongly declined in front corners than in hind, moderately, minutely punctate, punctures smaller and sparser than those on head, obliquely, shortly impressed near base on both sides. Scutellum medium-sized, subcordate, smooth, scattered with few minute punctures.

Elytra long (length:breadth=34.0:18.5), very gradually widened to rear, broadest at apical 1/3, then roundly narrowed to apexes; dorsum rather strongly convex, especially so in posterior portion; disc finely punctate-striate, punctures in striae small and closely set, 3rd stria to 5th deepened in basal portion and 5th reaching basal border; intervals feebly convex, scattered with minute punctures, these smaller than those on pronotum; sides very slightly enveloping body, then feebly expanded obliquely downward and margins slightly reflexed.

Mentum subquadrate, oblique-sided, raised medianly, somewhat coriaceous; gula parabolic, microscipically reticulate, with small impressions at vertex angle; terminal joint of each maxillary palpus medium-sized, with gently arcuate outer side about 2.4 times length of inner side and 1.3 times length of apical.

Prosternum fairly short, slightly raised in front, with median fusiform elevation finely margined in middle and posterior portions, rugose on surface; mesosternum very short, with V-shaped elevation between anterior halves of mesocoxal cavities, rather closely, roughly punctate on surface; metasternum long, fairly smooth and finely punctate in middle, somewhat coriaceous and fairly roughly punctate in lateral portions. Abdomen finely punctate, 3 anterior sternites and anterior-lateral portion of penultimate shallowly wrinkled, borders between 3rd and 4th sternite, also 4th and 5th rather strongly depressed.

Legs finely, rather closely punctate with short hairs, those on undersurface in apical portions of femora and also on undersurface of tarsi fairly long; femora moderately thickened; tibiae feebly thickened and incurved toward each apex; tarsi relatively long, 1st joint to penultimate very slightly dilated to each apex, apical joint long, relative length of each joint (base to apex): 1.8,

0.9, 0.8, 0.6, 3.3; 2.0, 1.2, 1.1, 0.9, 3.5; 3.5, 1.4, 1.2, 4.0, resptectively; claws sharp.

Body length: 6.5 mm.

Holotype: ♂, Sungkang, Nantou Hsien, Formosa, 28. VII. 1972, T. NAKAMURA leg.

This new species somewhat resembles *Hemicera kurosawai* MASUMOTO, or *Hemicera tsuyukii* MASUMOTO, both from Formosa, but is easily distinguishable from those allied ones by its elongate-oblong body, and shape of the aedeagus.

Genus *Neoplamius* MASUMOTO, 1981

Neoplamius MASUMOTO, 1981, Ent. Rev. Japan, **36**, (1): 15

Type-species of the genus: *Neoplamius zoltani* MASUMOTO, 1981.

In 1981, I described the new genus *Neoplamius* and 2 new species belonging to it at the same time. Dr. Y. KUROSAWA and Mr. T. INOMATA suggested that I should designate the type-species.

Tribe Tenebrionini

Setenis kurosawai sp. nov.

Brownish black; antennae, scutellum, elytra, major portion of undersurface etc., lighter in color; weakly, sericiously shining; margin of pronotum, scutellum, legs, 2 apical abdominal sternites etc., moderately shining. Elongate; moderately convex, softly flattened anteriorly.

Head subhexagonal, rather weakly convex, fairly flat anteriorly, shallowly, moderately closely, finely punctate; frontal suture fine, with both ends bent oblique-forward and reaching outer margin; clypeus fairly broad, very feebly convex, slightly declined in front, shortly, shallowly, transversely impressed in middle, with front margin nearly straightly truncate and its ends rounded; genae flabellate, depressed in posterior portions, impunctate along eyes; eyes medium-sized, transverse, convex above, shortly arched laterally; interocular space about 2.5 times eye diameter, with obsolete, longitudinal impressions on both sides; ocular sulci clear but not so deep; vertex only sparsely punctate; antennae rather short, reaching anterior 1/4 of pronotum, moderately club-like, 7th joint to 10th dilated to each apex, relative length of each joint (base to apex): 1.6, 0.8, 2.4, 1.8, 1.7, 1.6, 1.5, 1.5, 1.7, 1.7, 2.0.

Pronotum subquadrate (breadth:length=21.0:16.5), broadest at anterior 1/3, roundly narrowed to front, very feebly narrowed to rear, weakly sinuate before base, entirely margined; front border very feebly backward-arcuate; basal border weakly bisinuate; sides very slightly, bluntly

serrate; front angles fairly broadly rounded; hind angles acute and slightly, obliquely produced; disc weakly convex, moderately closely, irregularly, finely punctate, shallowly impressed in crescent-shape at median along front margin, also shallowly impressed in middle and near base on both sides. Scutellum subcordate, finely punctate, punctures finer than those on pronotum, longitudinally depressed in middle.

Elytra oblong (length:breadth=56.0:29.5), 3.5 times length and 1.4 times breadth of pronotum, broadest at apical 1/3, roundly narrowed to rear, very feebly, nearly straightly, narrowed to front, very slightly produced in apical portion; dorsum fairly strongly, convex, softly flattened in anterior half, moderately roundly declined to apexes, fairly strongly declined in lateral; disc finely punctate-striate, punctures very small and irregularly arranged; intervals very broad, nearly flat or only feebly convex, almost impunctate, finely, transversely microsculptured; sides indented from both sides at anterior 1/5, finely margined.

Mentum subcordate, roundly raised in middle, densely haired; gula triangular with rounded vertex angle, microshagreened, transversely, finely striated; terminal joint of each maxillary palpus medium sized with arcuate outer side about 2.2 times length of inner, 1.3 times length of apical.

Prosternum moderate-sized, microshagreened, depressed along anterior margin of each procoxal cavity, with intercoxal space fairly broad, moderately raised, softly depressed in median and shallowly bisulcate posteriorly, prosternal process small and semicircular, raised in middle; mesosternum short, with rear margin fairly strongly raised in V-shape, shallowly wrinkled and sparsely, finely punctate; metasternum moderate-sized, microshagreened, moderately closely punctate laterally, with fine median line from anterior 1/4 to rear border. Abdomen fairly closely, finely punctate, with 3 anterior sternites microshagreened, shallowly, longitudinally wrinkled, 2 apical ones smooth and finely punctate, but punctures stronger than those on 3 anterior.

Femora elongate, moderately thickened to middle: fore tibiae moderately thickened to each apex, outer margin straight in basal half, feebly arcuate in apical half, inner margin with remarkable laminate tooth at basal 2/5, weakly dilated and haired in apical 2/5, middle tibiae weakly thickened to apex, outer margin nearly straight, inner margin slightly bisinuate, haired in apical 2/7, hind tibiae moderately thickened to apex, outer margin nearly straight, inner margin with deep emargination at apical 2/7, haired in apical 1/7; tarsi fairly long, relative length of each joint (base to apex): 1.6, 1.2, 1.1, 1.0, 6.3; 1.9, 1.4, 1.3, 1.2, 6.5; 3.4, 1.6, 1.4, 7.5, respectively; claws fairly large, falciform.

Female, compared with male, body broader (especially remarkable in pronotum), punctures on upper surface stronger and closer, elytra more deeply striate; legs simple.

Body length: 17.5-18.5 mm.

Holotype: ♂, Central Formosa (no detailed data; captured by a native collector), paratype;

1 ex., Sungkang, Nantou Hsien, 11. VI. 1974, H. YOKOYAMA leg.

This new species is very easily distinguishable from other known *Setenis* by characteristic shape of legs.

Dr. Y. KUROSAWA gave me the chance to examine the specimen, and Dr. Z. KASZAB informed me that this species is new to science.

Setenis kaoshana sp. nov.

Dark brownish black; hairs in apical portions of tibiae and on undersurfaces of tarsal joints reddish brown. Elongate, widened posteriorly; moderately convex.

Head rather large, weakly raised posteriorly, fairly flat anteriorly, closely punctate in major portion, comparatively sparsely and rugosely punctate in middle; frontal suture very fine with both ends bent obliquely forward and reaching outer margin; clypeus transverse, transversely, feebly raised, more finely punctate than frons, with front margin straight and its ends roundly, bent oblique-backward, obsoletely, transversely impressed just before fronto-clypeal border; genae flabellate, more finely punctate than clypeus, weakly depressed posteriorly; eyes medium-sized, a little transverse, weakly convex above, moderately roundly arched laterally; interocular space about twice length eye diameter, shallowly, obliquely impressed on both sides; antennae compact, 6th joint to 10th dilated to each apex, 11th somewhat ovoid, relative length of each joint (base to apex): 1.9, 0.9, 2.0, 1.3, 1.2, 1.4, 1.4, 1.7, 1.6, 1.6, 2.1.

Pronotum transverse (breadth:length=22.5:16.5), broadest at middle, roundly narrowed to front and rear; front border nearly straight, finely margined but margin interrupted in median 1/3; basal border gently bisinuate, comparatively thickly margined; sides widely arcuate, finely margined; front angles obtuse; hind angles a little acute; disc moderately convex, fairly closely, irregularly punctate, punctures a little sparser, coalescent and rather rugose in middle, finer in anterior and basal portions, closer in lateral, longitudinally impressed in basal portion on both sides. Scutellum triangular with rounded apex, closely, microscopically punctate.

Elytra fairly large (length:breadth=57.0:32.5), broadest at apical 1/4, roundly narrowed to rear, gradually, nearly straightly narrowed to front, feebly produced in apical portion; dorsum moderately convex, softly flattened after scutellum; disc punctate-striate, punctures in striae notching intervals, distance between punctures 1-3 times their diameter, with 5th stria distinctly deepened in basal portion and reaching margin; intervals moderately convex, scattered with minute punctures, microscopically, shallowly, transversely rugose; both sides softly indented at basal 1/4, very finely margined.

Mentum ovoid, truncate at base, raised anteriorly, closely punctate and pubescent; gula para-

bolic, microshagreened; terminal joint of each maxillary palpus fairly large, with arcuate outer side about 2.2 times length of inner, 1.2 times length of apical.

Prosternum fairly broad, somewhat glassy, rather closely punctate, finely margined in front, raised along inner portion of each procoxal cavity, with intercoxal space fairly broad, clearly not strongly raised, prosternal process wide and only very feebly produced to rear; mesosternum weakly raised and rugose in anterior-inner portion of each mesocoxal cavity; metasternum fairly broad, rather glassy but somewhat coriaceous, finely haired, hairs denser laterally, especially remarkable in anterior portion. Abdomen also glassy, closely punctate, with each basal half of 3 anterior sternites longitudinally rugose, 2 apical sternites more finely punctate, 2nd sternite and 3rd shallowly impressed near lateral margins.

Legs moderate-sized; femora fairly slender; tibiae weakly thickened to each apex, haired in apical portion of inside, fore tibiae curved slightly in- and downward, middle and hind tibiae very feebly curved in- and upward; tarsi comparatively long, relative length of each joint (base to apex): 1.5, 1.1, 1.0, 1.1, 5.0; 2.1, 1.3, 1.2, 1.2, 6.0; 4.6, 2.0, 1.5, 6.5; claws medium-sized, falciform.

Female, compared with male, more roughly punctate on upper surface, less strongly curved in each tibia.

Body length: 18.5–19.5 mm.

Holotype: ♂, Kunyang (3,000 m), Nantou Hsien, Formosa, 1. VII. 1965, Y. KUROSAWA leg.; paratypes: 3 exs., ditto.

This new species somewhat resembles *S. striatipennis* LEWIS from Japan, but differs from the latter in having a smaller body, a little rougher upper surface, more deeply striated elytra, and a differently shaped aedeagus.

Setenis formosana MASUMOTO, 1981

Setenis formosana MASUMOTO, 1981, Elytra, **9** (2): 88,

Setenis nitidula M. T. CHÛJÔ, 1981, Esakia 17:133, (syn. nov.)

Elytra vol. 9 No. 2 was published on 15. Nov., 1981, since Esakia vol. 17 was published on 30. Nov., 1981

Setenis taiwana MASUMOTO, 1981

Setenis taiwana MASUMOTO, 1981, Elytra, **9** (2): 89,

Setenis similis M. T. CHÛJÔ, 1981, Esakia, 17:136, (syn. nov.)

Cryphaeus formosanus sp. nov.

Brown, a little darker in parts; hairs on surfaces pale yellow; dully shining. Elongate and subparallel-sided; fairly strongly convex longitudinally.

Head subhexagonal, microreticulate, closely punctate, punctures shallow, fairly large, granulated, with pair of upright, subconical, cross-sectionally somewhat longitudinal, nearly parallel seen from back, haired (hairs longer and denser toward each apex) horns; fronto-clypeal border shallowly but broadly backward-arcuately grooved; clypeus semicircular, weakly convex, with front margin nearly, straight, subrectangularly produced forward and weakly bent above at both ends; genae roundly produced laterally, depressed along anterior margins of eyes; eyes medium-sized, oblique-oval, divided into upper and lower portions by extension of genae; interocular space about twice length eye diameter, with longitudinal concavity, its bottom impunctate and its front connected with fronto-clypeal groove; antennae medium-sized, reaching beyond middle of pronotum, 3 apical joints comparatively large and widened, relative length of each joint (base to apex): 2.0, 1.2, 1.8, 1.6, 1.5, 1.4, 1.4, 1.3, 2.1, 1.8, 1.7.

Pronotum subquadrate (breadth:length=18.5:16.5), broadest at anterior 1/3 or basal 1/3, moderately roundly narrowed to front, very slightly sinuate after middle, subparallel in basal 1/3; front border weakly bisinuate; basal border moderately bisinuate, narrowly explanate along margin; sides fairly strongly declined, indented from both sides after middle; front angles narrowly roundly produced forward; hind angles subrectangular, slightly acute in dorsal view; disc rather strongly convex, very feebly swollen around anterior 1/3 and middle on both sides, closely punctate, punctures as on head, moderately densely haired, hairs bent, clearly longer than those on head, with median impunctate groove in posterior 2/3, oblique, short and shallow impressions at base on both sides. Scutellum subcordate, closely, finely punctate and densely, finely haired.

Elytra long (length:breadth=52.0:20.0), 3.2 times length and 1.2 times breadth of pronotum, subparallel-sided, roundly narrowed in apical 1/3; dorsum strongly convex, nearly subcylindrical, faintly depressed after scutellum; disc microreticulate, shallowly, somewhat transversely wrinkled, with rows of small, irregularly arranged punctures, those in inner portion smaller than those in outer; intervals only slightly convex, irregularly punctate, punctures as large as those in rows or a little smaller, so, seen as irregularly punctate throughout on disc, haired, hairs bent, longer but sparser than those on pronotum; sides abruptly declined, margins invisible in dorsal view, very finely margined.

Mentum protruded oblique-downward, moderately divergent forward, with front margin emarginate in middle; gula parabolic, transversely microreticulate; terminal joint of each maxillary palpus securiform, with arcuate outer side twice length of inner, 1.5 times length of apical.

Prosternum fairly broad, shallowly, closely punctate (punctures like on head and pronotum), often coalesced transversely, with intercoxal space strongly raised, prosternal process small and semicircular, depressed and rugose; mesosternum rather short, very closely, finely punctate, finely haired, moderately raised in Y-shape posteriorly; metasternum fairly long and broad, rather closely punctate and haired, punctures like on prosternum, smaller to lateral portions, hairs long in middle and shorter to lateral, shagreened laterally, with median line from frontal 1/5 to rear border. Abdomen finely punctate and haired, punctures smaller but sparser and hairs shorter to lateral, punctures smaller and closer, hairs shorter to apex.

Legs without any special characteristics; relative length of each tarsal joint (base to apex): 1.5, 1,1, 1.0, 0.9, 3.5; 2.5, 1.7, 1.6, 1.5, 4.1; 3.2, 1.7, 1.5, 4.4, respectively; claws sharp.

Body length: ca. 10mm.

Holotype: ♂, Tapan, Central Formosa, 15. V. 1974, S. TAKEDA leg.

This new species is quite unique in the Genus *Cryphaeus* in having an elongate, brown body with bent, pale yellow hairs on the surfaces.

***Cryphaeus incurvatus* sp. nov.**

This new species is closely related to *Cryphaeus punctatulus* (LEWIS) from Japan, but is easily separated from the latter in the following points:

Body smaller and shorter; often slightly lighter in color.

Male: Head narrower, rather subhexagonal, with front margin straight and both ends bent oblique-backward; clypeus narrower, with clypeo-genal sutures fine but more clear; genae more flat, with outer margins obtusely angulate in anterior 1/3, very weakly emarginate in middle, moderately roundly produced in posterior 1/3; interocular space more weakly concaved, with punctures a little sparser than those of *C. punctatulus*; horns thicker, lateral-arcuate when seen from front or back; antennae shorter, relative length of each joint (base to apex): 3.4, 1.5, 2.6, 1.9, 1.7, 1.6, 1.6, 1.6, 2.9, 2.9, 2.7.

Pronotum more clearly quadrate (breadth: length=34.0 : 23.0), broadest at anterior 1/3, moderately roundly narrowed to front, very feebly, nearly straightly narrowed to rear; front border more widely straight and shortly curved forward at both ends; basal border comparatively narrower; sides feebly serrate; front angles more acutely produced forward; hind angles nearly rectangular (less acute than *C. punctatulus*). Scutellum smaller, more finely punctate.

Elytra shorter (length:breadth=70.0:33.5), approximately 3 times length of own pronotum; disc with rows of punctures, these finer and fairly regularly set (in rows); intervals punctate, punctures like those in rows in shape and size, clearly weakly convex, especially remarkable in sutural ones.

Mentum subcordate, truncate at base, finely haired in anterior half; terminal joint of each maxillary palpus more weakly dilated.

Prosternum shorter, slightly more finely punctate, with intercoxal space more weakly raised, prosternal process semicircular, more strongly depressed; mesosternum with rear margin raised in V-shape, V-shape elevation shorter but wider, more finely punctate, more abruptly declined in front; metasternum shorter, more finely punctate, comparatively more distinctly, finely haired. Abdomen also shorter, more finely punctate, more distinctly, finely haired, especially so on anal sternite, with border between 2nd and 3rd sternites moderately arcuate forward (in the case of *C. punctatulus*, nearly straight), those between 3rd and 4th, 4th and 5th, (compared with *C. punctatulus*) more strongly arcuate forward.

Legs slightly shorter; relative length of each tarsal joint (base to apex): 1.4, 1.1, 1.1, 1.2, 4.4; 2.0, 1.7, 1.4, 1.6, 5.0; 2.7, 1.8, 1.7, 5.3, respectively.

Aedeagus shorter and thicker.

Female: Head broader with front margin more widely straight and both ends bent oblique-backward; genae roundly well-produced; protuberances pointing oblique-backward; interocular space narrower and weakly depressed in middle.

Pronotum broader, more gradually declined in lateral portions; front and hind angles more distinctly produced and angulate; disc less coarsely, less closely punctate; sides sparsely serrate. Scutellum subpentagonal, more finely punctate.

Elytra more finely punctate; intervals less strongly convex.

Body length: ca. 9.5 mm.

Holotype: ♂, Kenting Park, Pingtung Hsien, Formosa, 18. Ⅷ. 1979. S. TAKEDA leg.; paratypes: 2exs., ditto, 3. Ⅴ. 1971, K. SAKAI leg.; 1 ex., ditto. 30. III. 1971, K. MATSUKI leg.; 1 ex., ditto., 15. Ⅳ. 1972, H. CHANG leg.; 1 ex., Juisui, Hualien Hsien, 17. Ⅳ.1978, K. MURAKAMI leg.

Cryphaeus taiwanus sp. nov.

This new species is closely allied to *Cryphaeus boleti* (LEWIS) from Japan, but is differentiated from the latter as follows:

Body slightly larger and broader; a little lighter in color (dark brownish black).

Head more transverse; clypeus narrower; genae clearly larger and obtusely angulate; horns more obliquely (in dorsal view) and widely arranged, obtuse at each apex; antennae with relative length of each joint (base to apex): 2.8, 2.1, 3.0, 2.8, 2.7, 2.6, 2.5, 2.4, 2.9, 2.8, 2.6.

Pronotum broader (breadth:length=27.0:20.0), broadest at middle, moderately roundly narrowed to front (compared with *C. boleti*, more gently narrowed to front), nearly subparallel in posterior half; front border very feebly, widely emarginate; basal border more strongly bisinuate;

sides widely arcuate laterally; front angles more acute but not produced like *C. boleti*; hind angles feebly obliquely acute; disc less abruptly declined laterally, more closely punctate. Scutellum more closely, finely punctate.

Elytra with length: breadth=67.0:35.5; disc with rows of punctures, these comparatively stronger and coarser, feebly transverse; intervals nearly flat, often scattered with punctures like those in rows in size and shape.

Mentum narrower; gula shorter; terminal joint of each maxillary palpus less strongly dilated, with outer side more strongly arcuate.

Prosternum with prosternal process more strongly depressed, rounded at apex; mesosternum more slightly raised in V-shape in middle of rear margin, more finely punctate; metasternum a little narrower, a little closely, more finely punctate; abdomen more closely, slightly finely punctate.

Legs feebly shorter; tarsi with relative length of each joint (base to apex): 1.5, 1.1, 1.2, 1.3, 5.1; 2.5, 1.5, 1.5, 1.6, 5.9; 3.2, 1.9, 2.2, 6.1, respectively.

Aedeagus shorter, slightly thicker, more strongly bent near apex.

Body length: 7.2-8.2 mm.

Holotype: ♂, Wushe, Nantou Hsien, Formosa, 18. V. 1971, K. SAKAI leg,; paratype: 1 ex., ditto.

Cryphaeus inomatai sp. nov.

As this new species resembles *Cryphaeus duellicus* (LEWIS) from Japan, M. T. CHÛJÔ recorded it as *C. duellicus* from Formosa in 1967, but is easily distinguishable from the latter in the following points:

Body a little smaller and broader. Darker in color; weakly, sericeously shining.

Male: Head broader, more broadly depressed in middle; front margin nearly straight, or very feebly, widely emarginate, with both ends moderately roundly produced (not angulately produced like *C. duellicus*); genae a little more strongly, roundly produced laterally; horns inside of eyes more widely arranged; antennae with relative length (base to apex): 2.2, 1.6, 2.3, 1.9, 1.9, 1.8, 1.8, 1.7, 2.5, 2.4, 2.2.

Pronotum more transverse (breadth: length=29.5 : 19.5), broadest at basal 2/5, roundly narrowed to front, weakly sinuate before base; front border nearly straight, with both ends shortly curved forward; basal border more strongly bisinuate and clearly truncate opposite scutellum; sides widely arcuate (not serrate like *C. duellicus*); front angles obtuse, not produced; hind angles slightly more acute; disc comparatively moderately declined laterally. Scutellum short but wide.

Elytra broader (length : breadth=71.5 : 32.3); basal border more strongly bisinuate; disc with rows of punctures, these finer and fairly regularly arranged, scarsely striate; intervals flat or only very feebly convex, fairly closely, microscopically punctate.

Mentum narrower; terminal joint of each maxillary palpus with arcuate apical side. Prosternum with prosternal process smaller and triangular; mesosternum more strongly, but slightly raised in V-shape in middle of rear margin; metasternum less strongly, more sparsely punctate in posterior half; abdomen less strongly punctate.

Tibiae less strongly thickened to each apex; tarsi with relative length of each joint (base to apex): 2.0. 1.3, 1.3, 1.2, 4.6; 2.3, 1.7, 1.5, 1.5, 5.1; 3.3, 2.0, 1.8, 5.8, respectively; claws a little smaller.

Female: Both ends of front margin of head rounded; upper surface of fore body more closely punctate; intervals of elytra only very finely punctate.

Body length: 13mm.

Holotype: ♂, Meifeng, Nantou Hsien, Formosa, 13. V. 1973, H. YOKOYAMA leg.; paratypes: 1 ex., ditto., 14-17. V. 1973, 1 ex., ditto., 24. V. 1974, H. YOKOYAMA leg.; 1 ex., ditto., 20. V. 1974, K. AKIYAMA leg.; 2 exs., ditto., 25. IV. 1976, K. MASUMOTO leg.

Tribe Phrenapatini

Phthora formosana sp. nov.

This new species closely resembles *Phthora canalicollis* LEWIS from Japan, but is distinguishable from the latter in the following characteristics:

Body relatively larger; upper surface smoother.

Head less strongly depressed; clypeus smaller, less distinctly depressed; genae comparatively larger with outer margins oblique-roundly, feebly produced; antennae with 3 apical joints more remarkably club-like.

Pronotum more strongly convex above, a little more transverse (breadth : length=21.5 : 13.5); disc less closely punctate.

Elytra with length:breadth=32.0:23.0; disc more finely punctate-striate, punctures smaller but clearly notching intervals and a little more closely set; intervals broader and more moderately convex, with rows of microscopical, somewhat granulated punctures; epipleura a little narrower, finely but clearly punctate, with inner edges raised.

Mentum slightly larger and broader, more elevated and protruded forward.

Prosternum more shallowly punctate; abdomen shallowly but coarsely punctate in lateral

portions of 3 anterior sternites, more finely and closely punctate on 2 apical.

Body length: 4.2-4.8mm.

Holotype: ♂, Nanshanchi, Nantou Hsien, Formosa, 18. VI. 1972, C. -L. TU leg.; paratype: 1 ex., ditto.

Tribe Ulomini

Lyphia formosana sp. nov.

Dark reddish brown; antennae, mouth organs, legs, etc., lighter in color; dully shining (microreticulate) on upper surface. Elongate; subcylindrical.

Head subhexagonal, closely punctate; frons softly depressed and aslope, punctures larger than those on rest portion of head; clypeus broad, rather broadly raised in middle, with front margin straight but both ends rounded, fairly distinctly depressed around clypeo-genal borders; genae triangular, nearly flat and same level as clypeus, with outer margins tangential to eyes; eyes large, oblique, roundly produced laterally, separated from head by fine grooves, distance between eyes as long as their diameter; antennae compact, 4 apical joints distinctly large, 8th joint to 10th transverse, 11th nearly round, relative length of each joint (base to apex): 1.0, 0.6, 0.7, 0.4, 0.5, 0.5, 0.6, 1.0, 1.0, 1.0, 1.2.

Pronotum nearly trapezoid (breadth:length=14.0 : 13.5), broadest at basal 1/4, very slightly narrowed to base, feebly, then moderately narrowed to front; front border broadly arcuate forward, not margined; basal border more broadly arcuate to rear, clearly margined; sides distinctly sulcate; front angles invisible from above; hind angles subrectangular; disc strongly convex above, nearly hemispherical, closely punctate. Scutellum semicircular, closely and finely punctate.

Elytra long (length : breadth=34.0 : 15.5), about 2.4 times as long as pronotum, subparallel-sided in basal 2/3, broadest at apical 1/3, then roundly narrowed to rear; dorsum fairly strongly convex longitudinally; disc closely punctate (punctate-striae and scutellary striole indistinguishable), punctures in basal portion rather coarse and often coalescent; sides slightly enveloping body, sulcated along outer margins.

Mentum transverse-oblong, coarsely, closely punctate; gula triangular and smooth, with rounded vertex angle; terminal joint of each maxillary palpus elongate-ovoid.

Prosternum fairly broad, margined in front, moderately closely and coarsely punctate with very small prosternal process; mesosternum depressed in major portion (usually inserted under prosternum), finely raised in V-shape in middle of rear margin; metasternum broad, moderately

closely punctate throughout, with fine median groove in posterior half. Abdomen moderately closely but finely punctate, each puncture on 2 anterior sternites bearing short hair, anal sternite shallowly, somewhat roundly depressed near apex.

Femora fairly strongly thickened; metatibiae gradually widened and outcurved to each apex; relative length of each tarsal joint (base to apex): 0.7, 0.4, 0.4, 0.3, 1.6; 1.1, 0.4, 0.4, 0.5, 2.2; 1.6, 0.5, 0.5, 2.4, respectively; claws comparatively small, falciform.

Body length: 4.5-5.0 mm.

Holotype: ♂, Nanshanchi, Nantou Hsien, Formosa, 24. V. 1973, K. MASUMOTO leg.; 2 exs., ditto., 16. V. 1971, K. SAKAI leg.; 1 ex., ditto., 15. VII. 1974, 1 ex., ditto., 20. VII. 1974, C. -L. TU leg.

This new species resembles *Lyphia elongata* PIC from Tonkin, but differs from the latter in having a larger body with darker coloration, a distinctly dully shining (microreticulate) upper surface, a strongly convex (nearly hemispherical) pronotum, and indistinct elytral punctate-striae.

Tribe Diaperini

Basanus formosanus sp. nov.

This new species resembles *Basanus amamianus* M. T. CHÛJÔ from Amami Is., Japan, but is distinguishable from the latter in the following points:

Body comparatively larger and more elongate; two elytral basal fasciae narrower; upper surface almost glabrous.

Head more finely punctate; front margin nearly straight with both ends bent oblique-backward to eyes; genae impunctate in posterior portions (areas before eyes); antennae nearly same shape as *B. amamianus* but relative length of each joint (base to apex): 2.0, 0.7, 1.6, 1.7, 1.6, 1.7, 1.7, 1.7, 1.7, 1.7, 2.5; occiput less closely but more finely punctate.

Pronotum longer (breadth : length=17.5 : 10.5), more clearly narrower than elytra comparing at each base; sides more narrowly but a little deeply sulcated along outer margins; front angles distinctly produced forward; disc less convex, more finely punctate.

Elytra more elongate (length : breadth=37.0 : 23.0); dorsum more moderately convex (thickest at basal 1/3); disc more finely punctate, with each basal fascia tridentate forward and semi-quadridentate backward; sides more narrowly sulcate.

Prosternum longer, with prosternal process more distinct; mesosternum fairly raised along rear border; metasternum longer, microreticulate and punctate in lateral portions; abdomen finely but more distinctly punctate in lateral, broadly, somewhat transverse-hexagonally raised across border between 4th and anal sternite.

Legs more slender; relative length of each tarsal joint (base to apex): 1.3, 0.6, 0.5, 0.4, 2.5; 2.4, 1.1, 0.8, 0.7, 2.9; 4.4, 1.3, 1.0, 3.3, respectively; claws relatively larger.

Aedeagus more slender.

Compared with male, body of female more elongate and less shining.

Body length: 7.3–8.5 mm.

Holotype: ♂, Nanfengshan, Kaohsiung Hsien, Formosa, 28. Ⅳ. 1981, S. FUKUDA leg.; paratypes: lex., ditto., K. KINUGASA leg.; 1 ex., Lienhuachi, Nantou, Hsien, 22. Ⅴ. 1973, H. YOKOYAMA leg; 1 ex., (near Mt. Lala), Taoyuan-Taipei Heien, 8. Ⅴ. 1978, T. SHIMOMURA leg.

The new species may be that which M. T. CHÛJÔ (1967) determined as *Basanus javanus* CHEVROLAT.

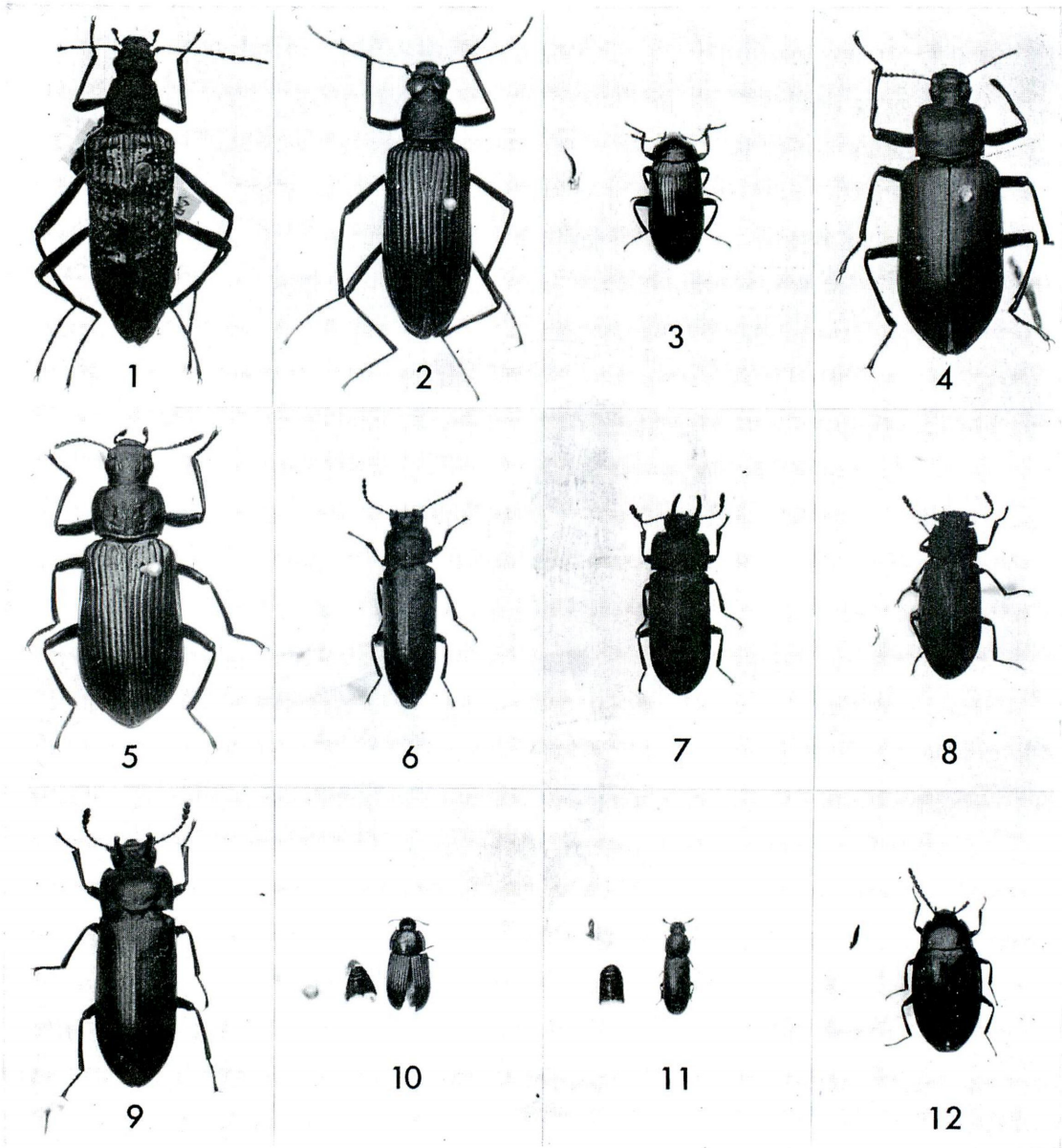
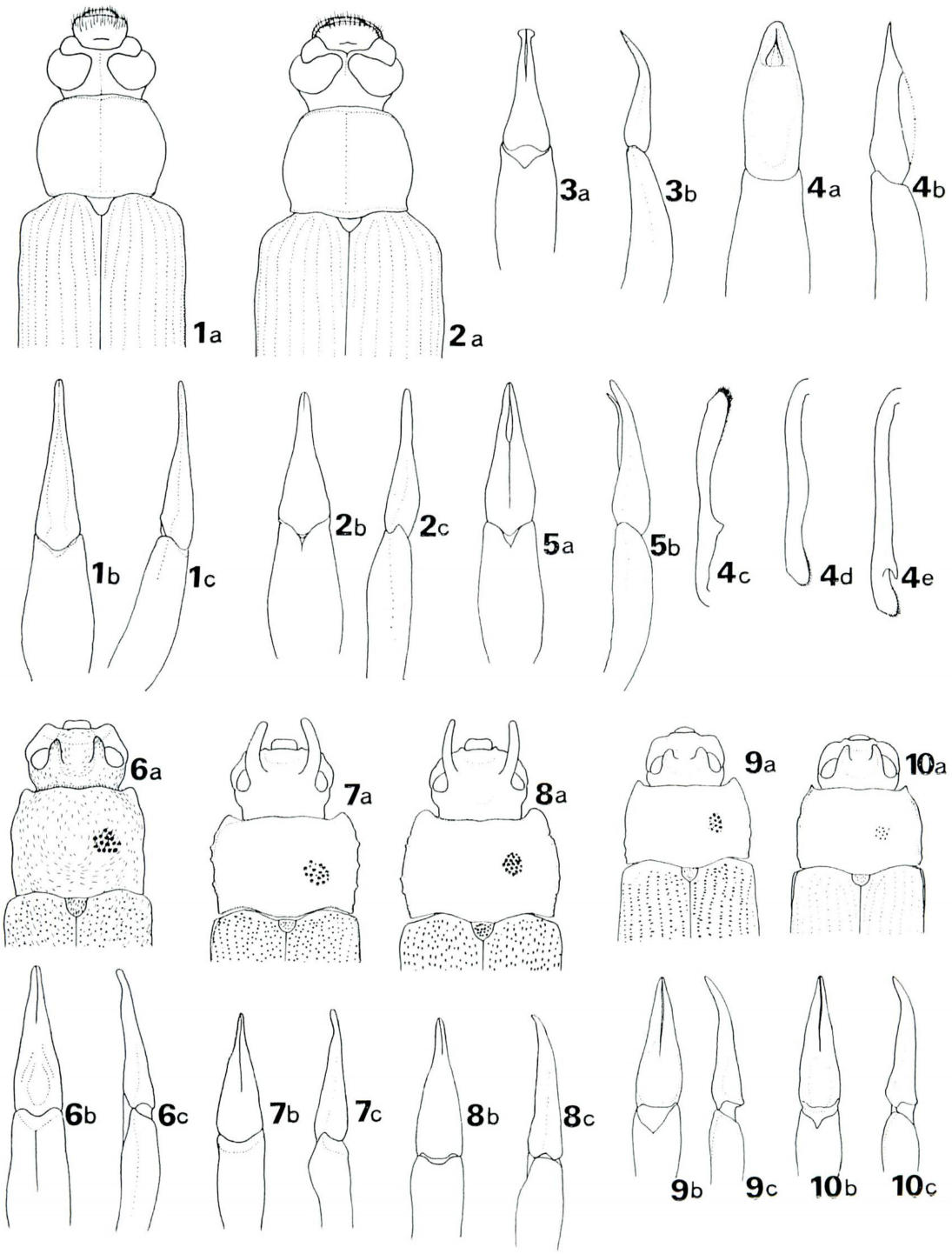


Fig. 1 1. *Strongylium nanfangum* sp. nov. (holotype); 2. *Strongylium endoi* sp. nov. (holotype); 3. *Hemicera nakamurai* sp. nov. (holotype); 4. *Setenis kurosawai* sp. nov. (holotype); 5. *Setenis kaoshana* sp. nov. (holotype); 6. *Cryphaeus formosanus* sp. nov. (holotype); 7. *Cryphaeus incurvatus* sp. nov. (holotype); 8. *Cryphaeus taiwanus* sp. nov. (holotype); 9. *Cryphaeus inomatai* sp. nov. (holotype); 10. *Phthora formosana* sp. nov. (holotype); 11. *Lyphia formosana* sp. nov. (holotype); 12. *Basanus formosanus* sp. nov. (holotype);


1a
2a
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3b
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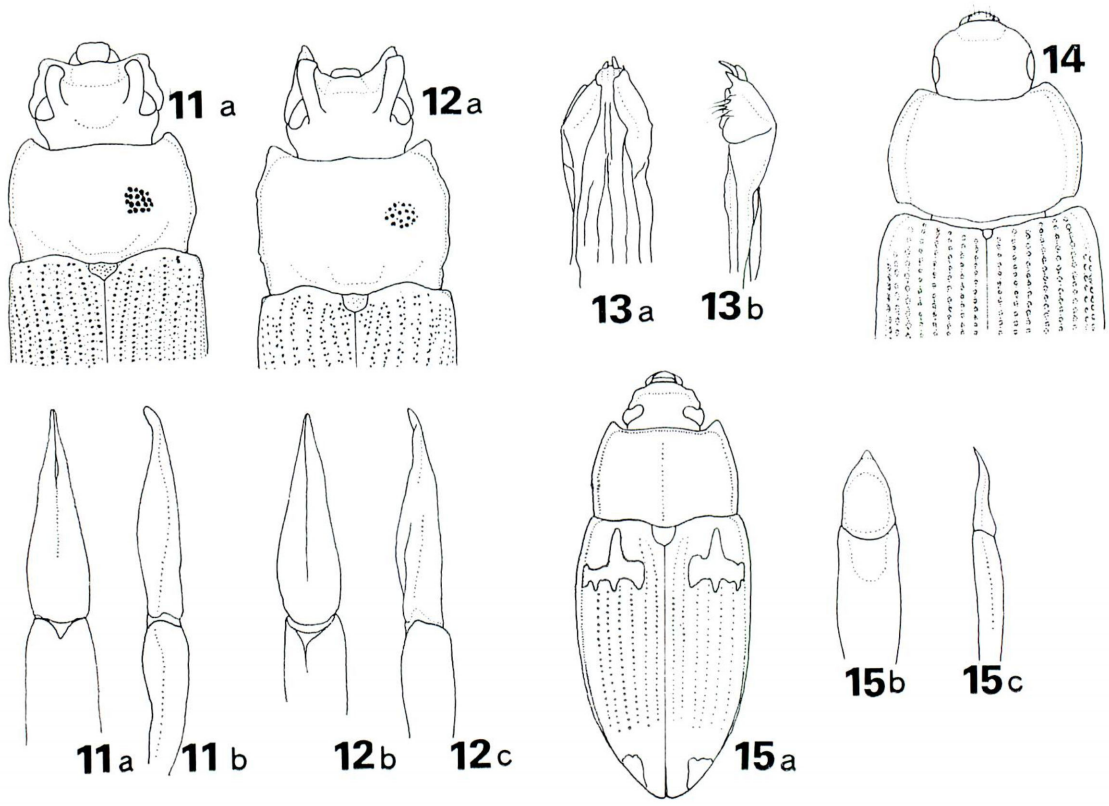


Fig. 2 1. *Strongylium endoi* sp.nov., 1 a: fore body, 1 b: aedeagus (dorsal view), 1 c: aedeagus (lateral view); 2. *Strongylium okumurai* MASUMOTO, 2 a: fore body, 2 b: aedeagus (dorsal view), 2 c: aedeagus (lateral view); 3. *Hemicera nakamurai* sp. nov., 3 a:aedeagus (dorsal view) 3 b: aedeagus (lateral view).; 4. *Setenis kurosawai* sp. nov. 4 a: aedeagus (dorsal view), 4 b: aedeagus (lateral view), 4 c: male fore leg, 4 d: male middle leg, 4 e: male hind leg; 5. *Setenis kaoshana* sp. nov., 5 a: aedeagus (dorsal view), 5 b: aedeagus (lateral view); 6. *Cryphaeus formosanus* sp. nov., 6 a: male fore body, 6b: aedeagus (dorsal view), 6 c: aedeagus (lateral view); 7. *Cryphaeus incurvatus* sp. nov., 7 a: male fore body, 7 b: aedeagus (dorsal view), 7 c: aedeagus (lateral view); 8. *Cryphaeus punctatulus* (LEWIS) 8 a: male fore body, 8 b: aedeagus (dorsal view), 8 c: aedeagus (lateral view); 9. *Cryphaeus taiwanus* sp. nov., 9 a: male fore body, 9 b: aedeagus (dorsal view), 9 c: aedeagus (lateral view); 10. *Cryphaeus boleti* (LEWIS), 10 a: male fore body, 10 b: aedeagus (dorsal view), 10 c: aedeagus (lateral view); 11. *Cryphaeus inomatai* sp. nov., 11 a: male fore body, 11 b: aedeagus (dorsal view), 11 c: aedeagus (lateral view); 12. *Cryphaeus duellicus* (LEWIS), 12 a: male fore body, 12 b: aedeagus (dorsal view), 12 c: aedeagus (lateral view); 13. *Lyphia formosana* sp. nov., 13 a:aedeagus (dorsal view), 13 b: aedeagus (lateral view); 14. *Phthora formosana* sp. nov., fore body; 15. *Basanus formosanus* sp. nov., 15 a: dorsal view, 15 b: aedeagus (dorsal view), 15 c: aedeagus (lateral view) (T. ENDO del.)

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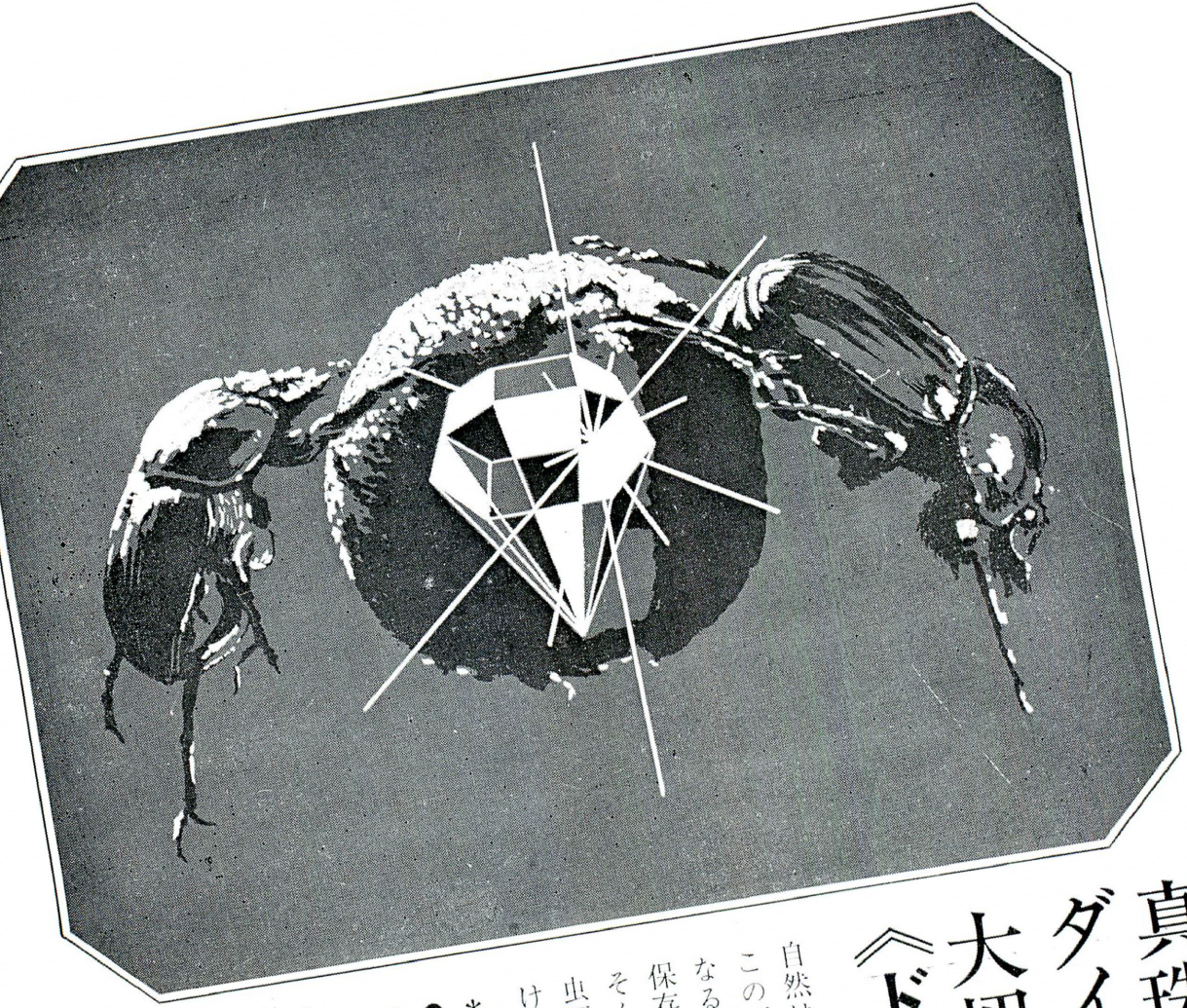
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ELYTRA Vol. 10, No. 1

昭和57年11月10日 印刷
昭和57年11月14日 発行

編集者 藤田 宏
新里達也
発行者 草間慶一
発行所 日本鞘翅目学会
Japanese Society of Coleopterology
東京都台東区東上野4-26-8
福田惣一方（〒 110）
c/o, FUKUDA, 4-26-8, Higashi-Ueno, Taitō-ku, Tōkyō Japan
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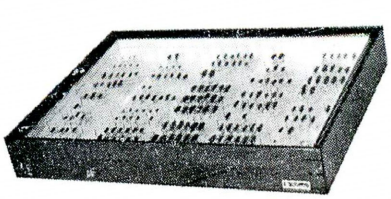
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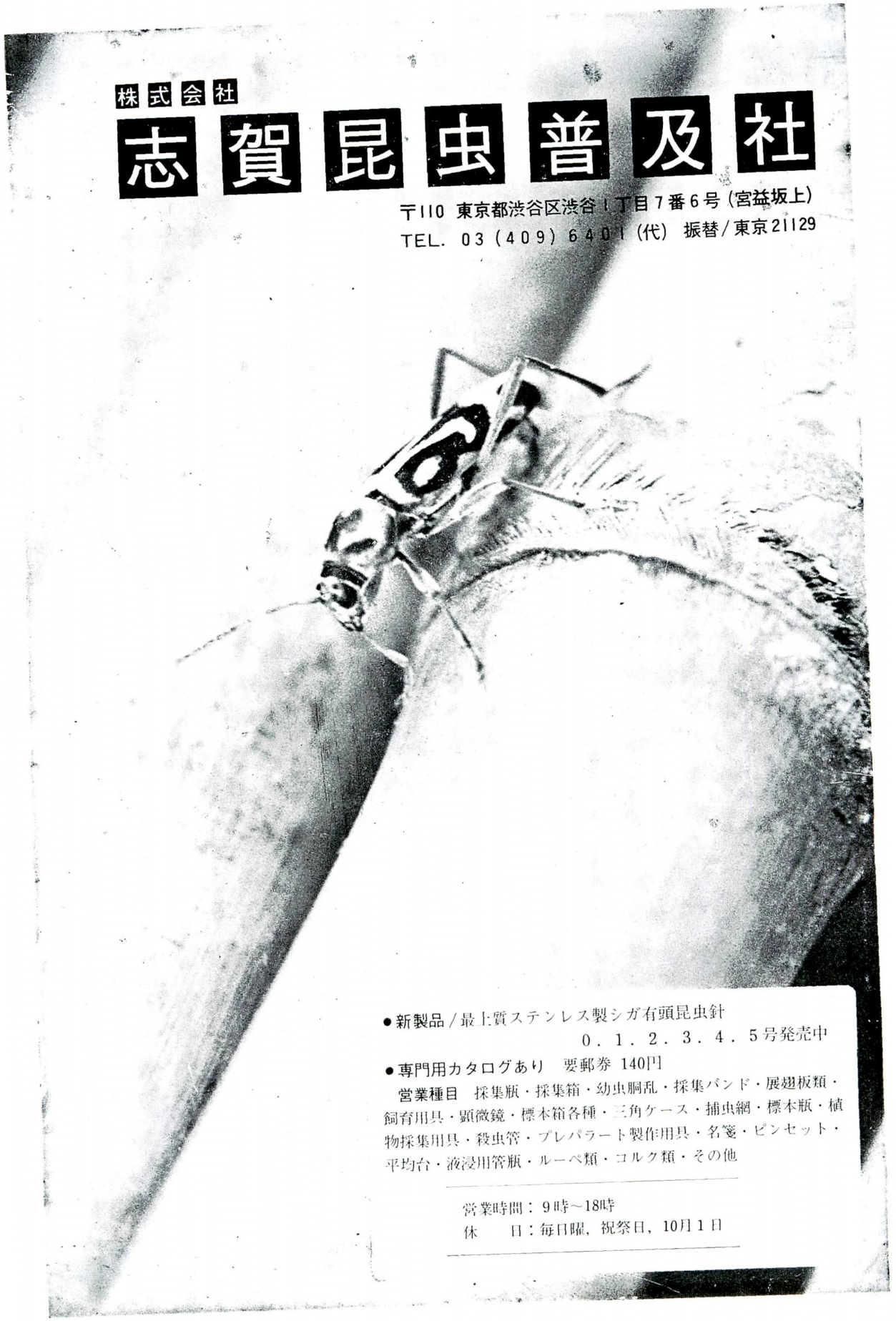
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